The 50 MHz DX Bulletin

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The 50 MHz DX Bulletin was founded by Harry Schools KA3B. It is dedicated to the understanding and utilization of long distance propagation in the 6-meter Amateur band. The current editor and publisher is Victor Frank, K6FV. Subscription rates are $20 U.S. third class mail, $25 U.S./Canada/Mexico airmail, $25 by airmail elsewhere for 12 issues. Circulation matters and DX reports should be sent to 12450 Skyline Blvd., Woodside, CA 94062-4541 USA. If you can reach the Internet, my address there is frank@marie.sri.com; if you cannot, and have packet, try K6FV@N0ARY.#NOCAL.CA.USA.NA. The Bulletin may be freely quoted, provided that credit is given.

PY0FM, Fernando de Noronha

Peter Zoch Sprengel, PY5CC, sent me the six meter logs and the photo below from his trip last March to Fernando de Noronha, where he operated as PY0FM.

Fernando de Noronha (HI36sd) (a group of islands) is a federal territory of Brazil. The highest point on the main island is 332 m above sea level, and is located at 3°51'S 32°25'W, 362 km NE of Cabo de Sao Roque, Brazil.

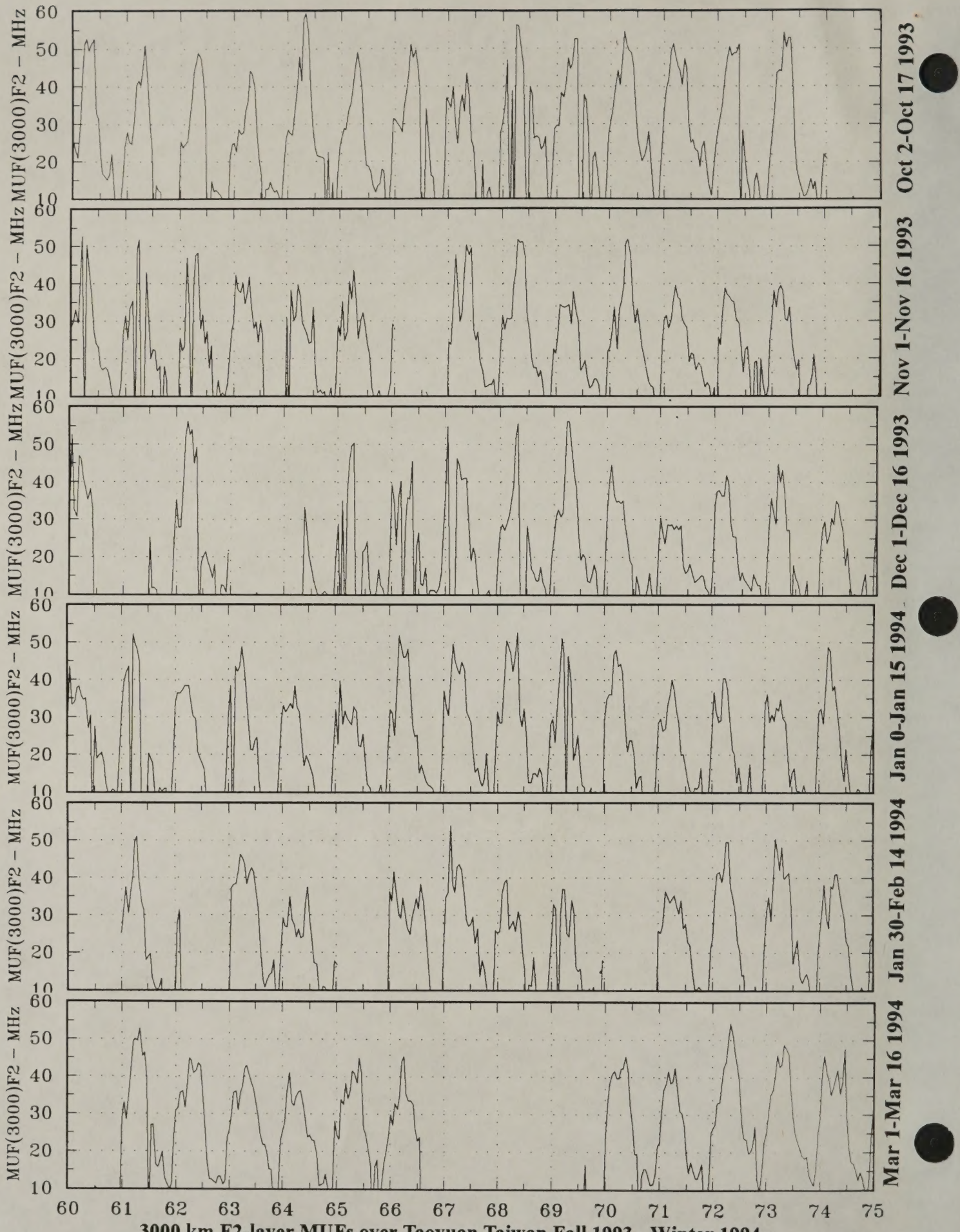
The island is 11 mi long and 4 mi wide and is of volcanic origin, with a steep unprotected shoreline. It was used as a penal colony in the 18th century, and the Atlantic Missile Range operated a tracking station there from 1957-62. The population in 1970 was 1239. Principal products are salt and Guano.

Peter's log shows 66 total contacts + beacon receptions starting on March 3 and ending March 21. In addition to North and South America, loggings were made of 5T5JC, ZD8VHF, EA8ACW, CT3FQ, and CT0WW.

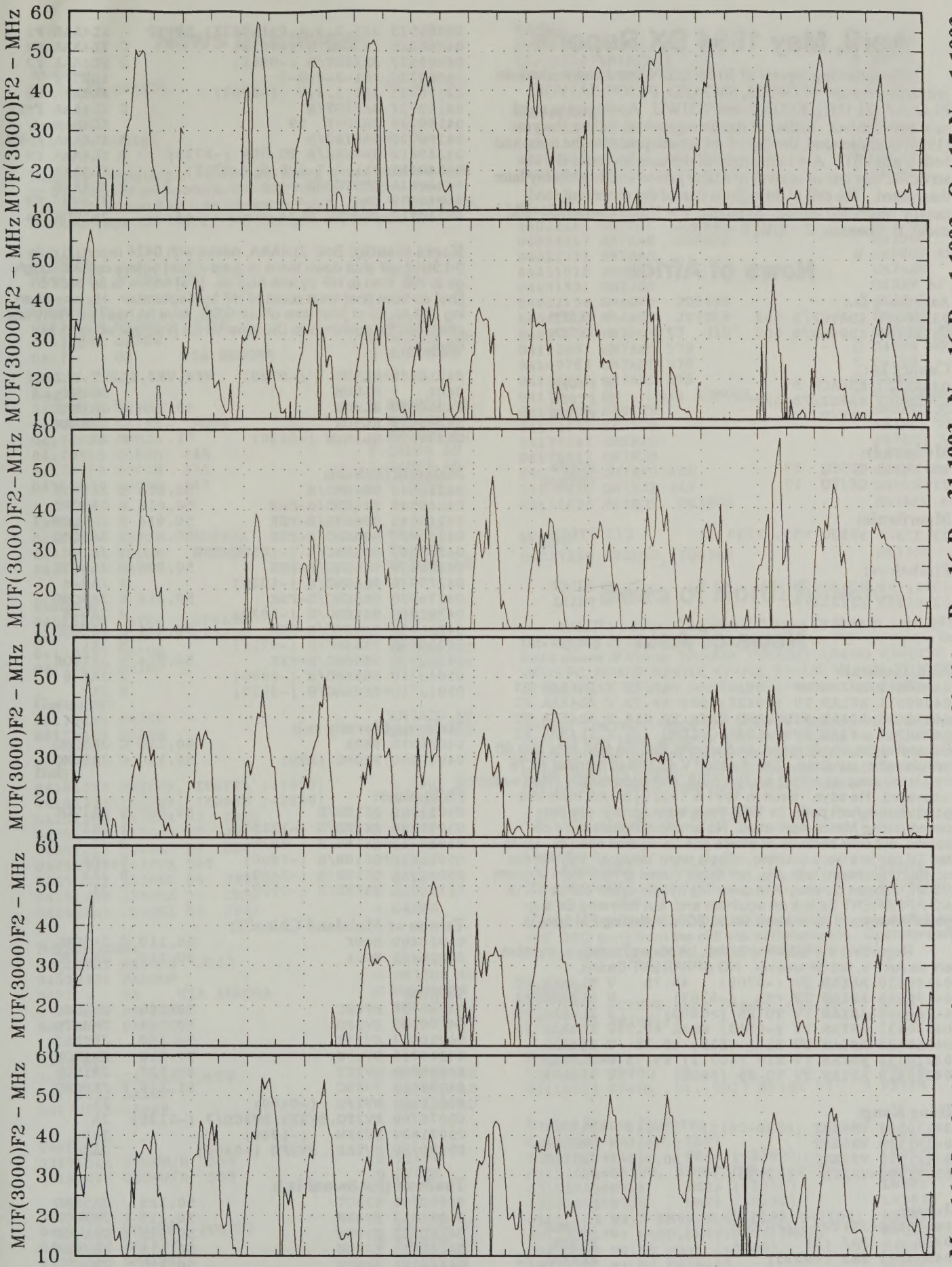
Congratulations Peter on a FB job, and thanks for the logs, which we used extensively in this month's Bulletin.

F2-layer MUFs, Oct 93-Mar 94

The plots on the following two pages show hourly 3000 km F2-layer MUFs over Taoyuan, Taiwan. They cover 15 days per page and are aligned vertically 30 days apart for ease in correlation with 27-28 day solar rotation. 4000 km MUFs are typically 10-15% higher, and thus six meters should have been open for 3000-4000 km (or longer) single-hop F2 paths whose ionospheric reflection point was over Taoyuan. Similar MUFs would be expected all along the +36° magnetic dip line; e.g., Hawaii, Panama, Canary Is., & Riyadh Saudi Arabia. A world map showing the magnetic equator, and locations of ±36° and ±76° magnetic dip appeared in our November 1992 Bulletin.



3000 km F2-layer MUFs over Taoyuan,Taiwan Fall 1993 - Winter 1994



3000 km F2-layer MUFs over Taoyuan,Taiwan Fall 1993 - Winter 1994

April, May 1994 DX Reports

The following reports of 50 MHz DX heard and worked are primarily courtesy of G4UPS, SM7AED, PY5CC, JA1VOK, ZL4AAA, ZL1MQ, K6QXY, and W3IWU. Apologies to any I may have left out. In the tabular listings which follow, the year (1994) is understood, the day of the month precedes the time, and both are in UTC. A + to the right of the time indicates the observation was one of several in a time period and is probably later than stated. The call at the right is that of the observing (and usually reporting) station. Symbols, V = Video Carrier, F = FM audio, B = beacon, C = CW, S = SSB.

News of Africa

Ascension Is.:

```
03120001 ZD8VHF/B 559                B PY0FM
03181420 ZD8VHF/B 559                B PY0FM
```

Canary Is.:

```
03040112 EH8ACW 59                   S PY0FM
03120006 EA8SIX/B 519                B PY0FM
0517     EA8/DJ3OS                     K1JRW
```

Madeira Is:

```
03030039 CT3FQ  59                   S PY0FM
0305     CT3FQ  59                     LW5EJU
```

Mauritania:

```
03132307 5T5JC 559, 2330 52        C/S PY0FM
```

Zimbabwe:

```
03041825 Z21SIX/B                    B 9H5EE
03161650 Z21SIX/B                    B 9H1AL
```

News of Asia

Asia, General:

```
04050608 ASIAN TV (-0615)      49.75 V ZL4AAA F2
04060511 ASIAN TV (>0625) S9+ 49.75 V ZL4AAA F2
04060635 ASIAN WIDEBAND DATA 50.016 D ZL4AAA F2
04090715 ASIAN TV (-1045) VIDEO     V ZL4AAA F2
```

Regarding the above report, Bob reports that the start time was 80 minutes after sundown. The Asiatic TV signals of nominal 49.75 frequency were as strong as 20 dB/S9, and good quality video was recovered. He says, "Even in 1991 & 1992 [I] did not have this good after-sunset path. In 1993 there were none in this time period during March-April at all. No amateur signals were observed, but only because of where [the band] was open to. Up to ten TV carriers were counted, offsets were 'unusual'; i.e., not the normal ones heard with JAs, nor those I used to hear from western USSR, eastern Europe. Am guessing middle-upper zones 17,18. NO APPARENT Es link on southern end, but following Es suggests there could have been some. [VK4, including FM band].

Regarding the following report, he states "mostly same carriers as April 9, but far weaker. NO APPARENT Es link.

```
04100620 ASIAN TV (-0709)   49.75   V ZL4AAA F2
04170645 ASIAN TV <S3  (-0703)     V ZL4AAA F2
04180649-ASIAN TV TO 25 (>0800)    V ZL4AAA F2
04190432 ASIAN TV (-0515) WEAK 49.75V ZL4AAA F2
04210432 ASIAN TV S1 (-0515) 49.75 V ZL4AAA
04210634 ASIAN TV S1+ (-0713) 49.75 V ZL4AAA
04240410 ASIAN TV TO S9 (0801)     V ZL4AAA
```

Hong Kong:

```
04170544 VS6XMT (0530-0615)  50.110   JA1VOK
04191110 VS6XMT              50.110   JA5CMO
04191112 VS6XMT              50.110   JA1VOK
05071700+VR2IH   (<1130)              JA
```

Japan:

```
04010620+JK1TVI  (<0720)              ZL2AGI
0404     JA2 (3)                      ZL3TY
04050523 JA3 (-0535)                  ZL4AAA F2
04050523 JA7ZMA, JA2IGY (-0535)     B ZL4AAA F2
04060513 JA6YBR/B (-0643)           B ZL4AAA F2
04060525 JA1,2,3,4,9 (-0632) 59+10    ZL4AAA F2
04060525 JS3UWJ/M (-0632)           C ZL4AAA F2
04060527 JA2IGY/B (-0648)           B ZL4AAA F2
04090720 JA1-2-4-5-9                  ZL2TPY
04170653 JA1,2,3,7  (-0703)           ZL4AAA F2
04180727 JA2IGY/B                   B ZL4AAA F+ES
04180728 JE2DWZ  59                   ZL4AAA
04180732 JA6YBR/B                   B ZL4AAA F+ES
04240612 JA6YBR/B TO 559 (-0723)    B ZL4AAA ES
04240613 JA1,2,3,4,5,6 (-0705)        ZL4AAA
04240630 JA2IGY/B                   B ZL4AAA
04240659 JA6                          HL9UH  ES
05140210 JS6MBK PL24        144       JA1VOK Es
```

Korea (South): Bob, ZL4AAA, relays with 0424 report, "Louis [HL9UH] will shut down there in June if [his] orders come through; go to W6, then to HP by late August. [He] hopes to be back on [the] air from [the] west coast of HP by September. He was hearing JA6 on Es at [the] time of our QSO, says he has had many late afternoon Es openings to Okinawa on Es [the] last week to ten days."

```
04010620+HL9UH   (-0720)   VK4,VK8,ZL2KT,ZL2AGI
0404     HL9UH                        ZL3TY
04210818 HL9UH                50.110 C JA9BHZ
04240659 HL9UH                       ZL4AAA
05030050 HL1MNN (-0130)       51.    F JA
```

Malaysia (Sabah):

```
04240540 9M6SMC/B             50.014 B JA1VOK
04240540 9M6SMC/B-FSK         50.014 B JA5CMO
04240545 9M6SMB/B-FSK         50.014 B JA1VOK
04240910 9M6SMC/B-FSK         50.014 B JA5CMO
04250800 9M6SMC/B (-1050) 599        B JA1-6
04250830 9M6SMC/B-FSK         50.014 B JA1VOK
04270930 9M6SMC/B (-1030)            B JA5-6
04270930 9M6SMC/B-FSK         50.014 B JA5CMO
04291000 9M6SMC/B (-1030)            B JA5-6
04291000 9M6SMC/B-FSK         50.014 B JA5CMO
04300700 9M6SMC/B (-0710)            B JA1
04300700 9M6SMC/B-FSK         50.014 B JA1VOK
05040710 9M6SMC/B (-0900)            B JA1-6
05040710+9M6SMC/B (-0920)            B JA
```

Malaysia (Spratly Is.):

```
04030915 9M0A                 50.110 C JA5CMO
04040800 9M0AG (HRD)          50.110 C JA5CMO
```

Philippines:

```
05031200 DX1HB/B              50.008 B JA1VOK
05031200 DX1HB/B (-1215)             B JA1
05040710+DX1HB/B (-0920)             B JA
05071630+DX1HB/B (-1800)             B JR6
05072310 DX1HB/B (-2400)             B JA5
05100715 DX1HB/B (-0930)             B JA
```

Taiwan or Mainland China??:

```
04020400 BO0K                 50.110 C JA5CMO
04020403 BO0K                 50.110   JA3JTG
```

Taiwan:

```
04160750 BV8BC                50.100   JA5CMO
04170950 BV2FG                50.109   JA3JTG
04220937 BV2FI                50.150   JA9BHZ
04300730 BV2FG                50.110   JA1VOK
04300809 BV2FI                50.120   JA1VOK
04302050 BV8BC                51.110 F JA5CMO
05070330 BV2FG  (-0400)               JA
05070700 BV2FG,BV2FI,BV2CD/7 (-1130)  JA
05071630 BV2KW   (-1800)              JR6
05080330 BV2AP, BV2FG (-0400)         JA
```

Thailand (Ko Samui Is.):

```
04090940 E28UT                50.125   JA5CMO
04091017 E28DX                50.115 C JA3JTG
04100843 E28DX                50.115 C JA1VOK
04120655 E28DX                50.115 C JA9BHZ
04120751 E28DX                50.115   JA3JTG
```

News of Europe

Austria:

```
04170644 OE5XBL                          SM7AED AU
```

Azores:

```
0517     CU1EZ                           K1JRW
```

Belarus: According to April 94 ***Six News***, a new station to look for this summer on Sporadic-E is RC2WBH in KO45in. Arne, SM7AED, worked him in an aurora on Feb 6. QSL: V. Shchedko, Molodezhnaya 165-143, 211440 Novopolotsk, Belarus, CIS.

Croatia:

```
04251331 9A3HZ  599 JN86              C G4UPS
```

Denmark:

```
04031519 OZ3ZW   JO54                   SM3JGG
04031544 OZ3ZW                        S SM3EQY AU
0417     OZ      VIA AURORA           G NORTHERN
```

England:

```
04022325 G4IFX                        S SM3EQY AU
04022345 G4IFX   IO94                   SM3JGG
04170655 G0DJA                          SM7AED AU
04170655 G0DJA  44A                   C G4UPS AU
04170758 G0CCH  33A                   C G4UPS AU
04251230 G4UPS  449                   C IK2GSO
```

Estonia:

```
04021554 ES1CW   KO29HK                 SM3JGG
04032137 ES1CW   KO29HK                 SM3JGG
04170637 ES5MC                          SM7AED AU
```

Finland:

```
04051408 OH1KH   KP01TN                 SM3JGG
04091907 OH3MF/9 KP36UN                 SM3JGG
04170535 OH1VR                          SM7AED AU
04170600 OH3MF                          SM7AED AU
```

Germany:

```
04170635 DK2ZF                          SM7AED AU
04170659 DL8PM                          SM7AED AU
```

Italy:

```
04181733 IK3IWX, IK0FTA (-1800)         G (NW) NOTES
04181733+IK0RWX, IK0SME (-1800)         G (NW)
04251250 IK2QDX 57  JN45              S G4UPS
04251254 IK2GSO 55  JN45              S G4UPS
04251259 I2WSG  59  JN45              S G4UPS
04251300+IK0FTA 559                   C G4UPS
04251322 IK0RWX 55  JN61GQ            S G4UPS
04251359 IK5OEA 57  JN52              S G4UPS
04251439 IK0OKY 59  JN61              S G4UPS
```

Netherlands:

```
04022301 PA0OOS  JO33                   SM3JGG
04022331 PA0OOS                       S SM3EQY AU
0417     PA     VIA AURORA           G NORTHERN
04170530 PA0RDY                         SM7AED AU
04170707 PA0LOU                         SM7AED AU
```

Norway:

```
0407     LA5SAA  JO29                 S SM3EQY AU
04170822 LA3DV                          SM7AED AU
04170825 LA8BP                          SM7AED AU
```

Portugal:

```
03171524 CT0WW/B  559                 B PY0FM
03181415 CT0WW/B  559                 B PY0FM
```

Scotland:

```
04022154 GM4ODM  IO87XI                 SM3JGG AU
04022228 GM1IPK                       S SM3EQY AU
04031515 GM4OBD                         OZ3ZW AU
0417     GM      VIA AURORA           G NORTHERN
```

Serbia:

```
04251338 YU1NW  57  KN04               S G4UPS
04251339+4N1SIX/B 579                 B G4UPS
04251352 YU1ABA 559                   C G4UPS
```

Slovenia:

```
04251329 S57A   599  (EX S57AM)       C G4UPS
04251330+S55ZRS/B 579                 B G4UPS
04251336 S59F   57  JN65              S G4UPS
04251344 S57AC  579 & 59              C G4UPS
```

Sweden:

```
04022202 SM5DIC  JO89JT                 SM3JGG
04022317 SM7BAE  JO65OP                 SM3JGG
04022321 SM7BAE                       S SM3EQY AU
04031515 SM4OBD                         SM7AED
04031521 SM3JGG                         OZ3ZW AU
04032154 SM6DWF  JO66HR                 SM3JGG
04041500 SM4BRD  JP70LW                 SM3JGG
04082130 SM3EQY 57  315°                SM7AED EBS
04110801 SM7AED 579                   C G4UPS NOTES
04140754 SM7AED 579                   C G4UPS
04150756 SM7AED 579                   C G4UPS
0417     SM     VIA AURORA           G NORTHERN
04170638 SM0CKR                         SM7AED AU
04170643 SM7FJE                         PA3RDY AU
04170647 SM3BIU                         SM7AED AU
04170647 SM7FJE                         9A3HZ  AU
04170805 SM7AED 55A                   C G4UPS AU
04170815 SM7FJE 449                   C G4UPS
04170826 SM3EQY, SM3JGG                 SM7AED AU
```

Wales:

```
04022254 GW3LDH  IO83MB                 SM3JGG
```

News of North America

W3EP's column. **The World Above 50 MHz** in June ***QST*** lists logging by Nester, LW5EJU in GF05, on TEP during the first three weeks of March: TI2NA/B, YV4AB/B, KP4SQ, KP4EOR, WP4EPC, NP4NP, KP4HX, KP4RE, KP4UK, V44KAI, YS1ECB, ZF1EJ, XE1J, TG9AJR, and TI4JHQ (+stations listed below).

Belize: The report below and three TV reception reports came from the May 1994 edition of ***VHF-UHF Digest***, the Official Publication of the Worldwide TV-FM DX Association which I mentioned in the March 94 Bulletin. The first observer is Matt Sittel in Tallahassee, FL. The TV observer is William Draeb of Kewaunee, WI.

```
04072301 V3 RADIO BELIZE      91.1    F SITTLE,FL
```

Canada:

```
05111500+VE6     (-2200)                K6QXY
05120000+VE7  (-0400)                   K6QXY
```

Cuba: A little late, but CO0FRC is planning to operate the June VHF QSO party from the cliff site at Bellemonte. Operators will be CO2JA, CO2KG, CO2PL, CO2OJ, CO2KK.

Mexico:

```
05121650 XE2HWB  sez beacon not op      K6QXY
05121735 XE2UZL/B                     B K6QXY
```

Puerto Rico:

```
03132355 KP4SQ  52                    S PY0FM
03140024 KP4UK  51, 0027 KP4HX 51     S PY0FM
```

United States, Eastern:

```
03152055 WA4LOX  EL87                   LW5EJU
03152055+K1TOL   FN44 (<2200)           LW5EJU
03152055+W3IWU, W3GUF FN20 (<2200)      LW5EJU
03152055+N2WK    FN03 (<2200)           LW5EJU
03152055+W3JO    FM29 (<2200)           LW5EJU
05111500 W4,5 EM60,EL40,DL98 (-2200)    K6QXY
05120000+W4 EM60,EL49,EM84,FM02,        K6QXY
05130000 W4,W5 weak (-0100)             K6QXY
05131500 W4,W3 FM18-19                  K6QXY
05182000 W1,3,5 FN11 (-2100)            K6QXY
05182049 K1JRW                          K6QXY
```

United States, Central:

```
02190005+KACV CH2 (TX)     54-60 MHZ T DRAEB, WI
02190005+KAMR CH4 (TX)     66-72 MHZ T DRAEB, WI
02190005+KFDX CH3 (TX)     60-66 MHZ T DRAEB, WI
04270140 W0,5,7,LA (EM31) (-0200)      K6QXY
04301725 W5,0  (-1830)                 K6QXY
05111500+W0,7   (-2200)                K6QXY
05120000+W5 EM64,EM73  (-0400)         K6QXY
05131500 N0LL/B, W0                  B K6QXY
05171500+W5,DM31, DM84  (-1600)        K6QXY
05190300 W5, OKLA                      K6QXY
```

United States, Western:

```
05171500 W7US/B, W7SKC/B (-1600)     B K6QXY
```

News of Oceania

Australia, General:

```
04092158 VK PAGERS (-2315)  148 MHZ    ZL4AAA ES
04170727 VK PAGERS          148 MHZ    ZL3TY AU
```

Australia, New South Wales (VK2):

```
0404     VK2 (3)                       ZL3TY
04040003 VK2 (-0040)                   ZL4AAA ES
04041022 VK2 (-1035)                   ZL4AAA ES
04090546 VK2ZXC              50.125    JA1VOK
04090600 VK2ZXC              50.125    JE1CCD
04090636 VK2QF               50.110 C  JH1WHS
04090703 VK2QF               50.110 C  JA9BHZ
04092100 VK2ANS                        ZL1MQ
04092202 VK2 (N)   (-2235)  144.1    S ZL4AAA ES
04100009 VK2    (-0148) WEAK           ZL4AAA ES
04102255 VK2BA  (-2330)                ZL4AAA ES
04110046 VK2GLS, VK2 (-0130)           ZL4AAA ES
04170217 VK2GLS  (-0230)               ZL4AAA ES
04170704 VK2ANS              50.125    JA1VOK
04170900 VK2,3,5 AU (SOME 144)         VK4    AU
04172310 VK2 (N) + VK4(>0100)          ZL4AAA ES
```

Australia, Victoria (VK3):

```
04050951+VK3ALM,VK3CNX       50.130    JA3JTG
04092245 VK3 FM (-2340)     105 MHZ  F ZL4AAA ES
04170710 VK3DUT                        ZL3TY AU
04180915 VK3DUT              50.125    JA5CMO
04190733 VK3DUT              50.110    JH1WHS
```

Australia, Queensland (VK4):

```
04010133 VK4RGG/B (-0236)            B ZL4AAA ES
04010529 VK4RGG/B (-0533)            B ZL4AAA ES
04031933 VK4RGG/B (-1950)            B ZL4AAA ES
04031935 VK4 (-1948)   TO 104.5 MHZ  F ZL4AAA ES
0404     VK4                           ZL2TPY
04040654 VK4IAM              50.150    JH1WHS
04040700 VK4APG              50.180    JA3JTG
04040704 VK4TL               50.140    JA3JTG
04040711 VK4CRT              50.150    JA3JTG
04040725 VK4LR               50.110    JA3JTG
04040727 VK4STS              50.150    JH1WHS
04040730 VK4YAR              50.130    JA3JTG
04040736 VK4PU               50.120    JA3JTG
04041009 VK4RGG/B (-1101)            B ZL4AAA ES
04042108 VK4RGG/B (>0055)            B ZL4AAA ES
04050207 VK4 (-0215)                   ZL4AAA ES
04050511 VK4AFL              50.110    JA3JTG
04050629 VK4SIX              50.140    JA3JTG
04082236 VK4RGG/B (>2250)            B ZL4AAA ES
04090339 VK4RGG/B (-0345)            B ZL4AAA ES
04090641 VK4WTN              50.150    JH1WHS
04090717 VK4JH               50.130    JH1WHS
04091215 VK4RGG/B                    B ZL4AAA ES
04092010 VK4  (-2340)  TO 88.7 MHZ   F ZL4AAA ES
04092010-VK4RGG/B (-2320)            B ZL4AAA ES
04092100 VK4AFL                        ZL1MQ
04092100-VK4KK, VK4APG                 ZL3NE
04092141 VK4        FM TO 107.7 MHZ  F ZL4AAA ES
04092202 VK4 (S)   (-2235)  144.1    S ZL4AAA ES
04110506 VK4AFL              50.110    JH1WHS
04110515 VK4RO               50.130    JH1WHS
04121113 VK4RGG/B (-1219)            B ZL4AAA ES
04162157 VK4RGG/B (>2206)            B ZL4AAA ES
04162213+VK4                           ZL4AAA ES
04170631+VK4PU,VK4IAM    50.140/145    JA1VOK
04170842-VK4                           VK2-3-5 AU
04172105 VK4RGG/B  (-0123)             ZL4AAA ES
04172231 VK4   (-0120)  TO 89.3 MHZ  F ZL4AAA ES
04172248 VK4, VK2       TO 107.7 MHZ  F ZL4AAA ES
04172259 VK4  S5 (-2304)  144 MHZ      ZL4AAA ES
```

ZL4AAA writes (of April 17) that "JA1VOK reported VS6, VK6 0530-0615; then VK4s including MUFs to past 52 MHz starting aorund 0620. Also, VK4s reported aurora on this date 0900 to perhaps 1400 to VK2,3,5 including some 144 MHz contacts. WWVH reported a K index of 6 at 0600. Worked two VK4s on 144 MHz Es with signals peaking S5; distances around 1300 miles."

```
04180649-VK4RGG/B + VK4 (>0800)        ZL4AAA ES
04180930 VK4KK               50.110    JA5CMO
04190650 VK4ZAA              50.130    JH1WHS
04190708 VK4GMH              50.105    JE1CCD
04191023 VK4ZJR              50.140    JH1WHS
04191112 VK4FP               50.150    JA1VOK
04200911 VK4RGG/B  (-1212)           B ZL4AAA ES
04201121 VK4 (S) (-1123)TO 89.3 MHZ  F ZL4AAA ES
04240412 VK4RGG/B  (-0419)           B ZL4AAA ES
04302325 VK4RGG/B (-2329) MS-RELATED   ZL4AAA ES
```

Australia, South (VK5):

```
04040003 VK5 (-0040)                   ZL4AAA ES
04090700 VK5BC               50.105 C  JH1WHS
04100009 VK5BC  (-0148) WEAK           ZL4AAA ES
04102255 VK5BC (-2330)                 ZL4AAA ES
04102255+VK5ARK (-2330)                ZL4AAA ES
04170842 VK5NY                         ZL3TY AU
05100715+VK5ZBK  (-0930)               JA
```

Australia, West (VK6):

```
04090620 VK6RJ               50.110 C  JH1WHS
04170556 VK6JJ               50.140    JA1VOK
04170609 VK6AKT              50.150    JA1VOK
```

Australia, Tasmania (VK7):

```
04170520+VK7RNW/B (-0850)    50.057 B  ZL3TY AU
```

Australia, North Territory (VK8):

```
05100715+VK8VF/B (-0930)             B JA
```

French Oceania:

```
04150817 FO3BM (HRD)         50.110 C  JR6HI
```

Hawaii:

```
05091500 KH6HME/B (-100300) 144.07   B K6QXY TROP
05132018 KH6HME/B (-2030)            B K6QXY Es
```

Johnston Is.: see Beacon News.

New Caledonia: ZL4AAA writes (of the report below), "FM band Es to FK8 in and out to 89.3 MHz; signals off path by 40° (270° vs 310°), badly distorted (identical to FM multipath)."

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04042148 FK8 (-2222)   TO 89.3 MHZ   F ZL4AAA Es
04102030 FK1UH                         ZL1MQ
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New Zealand: Bob, ZL4AAA, summarizes the month of April 1994 from northern New Zealand: "DX Heard/Worked: JA1,2,3, 4,5,6,7,9; VK2,3,4,5; ZL3; HL9. 50 MHz F-layer dates: 5,6,17,18, 24. 49.75 MHz F-layer withOUT amateur signals: 9,10,19,21. 50 MHz Es dates: 1,3,4,5,8,9,10,11,12,16,17,18,20,24,30. 88MHz + FM Es dates: 3,4,9,17,18,20. 144 MHz Es dates: 9,17. This report covers a quite incredible amount of Es for the month of April (October equivalent in northern hemisphere). If I also included Australian 46.170 and 46.239, that did NOT make it to 50 MHz, the number of hours would more than triple! I will be interested to see if those in northern hemisphere observed a higher percentage of Es time than 'normal' for April as well, and if any of the dates 'match' between the two. 144 MHz Es openings are extremely rare in April (October) as well, indicating not only an enhanced volume of Es, but enhanced MUFs as well. One date would be unusual; two quite incredible when you consider my Es 'target' is essentially only VK1-5 covering around 70° of my azimuth and then only between 1250 and 1500 miles out."

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0404      ZL2KT, ZL2TPY                      JA5CMO
04040740 ZL3NW                 50.110        JA5CMO
04040750+ZL3TIC,ZL3ADT,ZL2UCG50.120          JA5CMO
04050520 ZL4AAA                50.110        JA3JTG
04090556 ZL2TPY                50.110        JA9BHZ
04090601+ZL2KO, ZL2TPY   50.110/125          JH1WHS
04092100-ZL1ADP                              VK4AFL
04092100-ZL3NE                               VK2NZ
04101931-ZL3MHF/B  (-1954)                 B ZL4AAA ES
04101947 ZL2AQR/3                            ZL4AAA ES
04102330 ZL1ADP                              VK2BA
0416      ZL3TY                              VK2GLS
04170520 ZL VIDEO WEAK,FLUTTR 45.25 V        ZL3TY AU
04170520+ZL3TIC,ZL2AQR,ZL3AAU                ZL3TY AU
04170654 ZL4AAA                50.105        JA1VOK
04240620 ZL4AAA                50.110 C      JA3JTG
04240645 ZL4AAA                50.110        JA5CMO
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Papua/New Guinea:

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04200856 P29CW                 50.115        JH1WHS
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Tonga:

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04130545 A35MW                 50.110 C      JA1ELY
04210620 A35MW                 50.110        JA3JTG
04210629 A35MW                 50.109        JA9BHZ
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News of South America

Argentina:

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03030038 LU1FA  59                         S PY0FM
03030038 LU9FWS 59                         S PY0FM
03030039 LU4DFZ 59                         S PY0FM
03030039 LU8EEM 59, LU8ALO 59              S PY0FM
03030040 LU2EIO 59, LU1BAO 59              S PY0FM
03030040 LW4DIR 59                         S PY0FM
03042022 LU3EMK/B 559                      B PY0FM
03070016 LU8DIO 59                         S PY0FM
03070021 LU1FA  53                         S PY0FM
03070025 AZ3FAF 51                         S PY0FM
03070035 LU8EWD 59, 0036 LU8DCH 53         S PY0FM
03070037 LW5EJU 59, 0039 LU6HFQ 51         S PY0FM
03070041 LU2FCW 59, 0117 LU6ARR 59         S PY0FM
03070120 LU6DLB 59                         S PY0FM
03070125 LU1DMA 59, 0125 LU4DMX 51         S PY0FM
03070130 LW2ELA 51, 0132 LW6EUQ 51         S PY0FM
03151855 LU8EEM    59                      S PY0FM
03211900 LU3EMK/B 599                      B PY0FM
03211924 LW5EJU 59, 1926 LU8AHW 55         S PY0FM
03211927 LU1DMA 59                         S PY0FM
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Brazil: LW5EJU in GF05 reports PU2PFM, PY2EAT, PY2DJC, PY2BKM, PY2XB, and PY0FM on TEP during the first three weeks of March.

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03030038 PP5BC  59                         S PY0FM
03030040 PY1QP  59                         S PY0FM
03040030 PY2DWP 59, 0034 PY5ZAH 59         S PY0FM
03040037 PY2BYT 59, 0039 PY2XB  59         S PY0FM
03040054 PY2BW  59                         S PY0FM
03040115 PU2UDE 59, 0118 PY5AQ  59         S PY0FM
03070007 PP5BC  59, 0008 PY2XB 59          S PY0FM
03070011 PY2NFE 59/599                   S/C PY0FM
03070018 PY2EAT 59                         S PY0FM
03070032 PY2DGK 52                         S PY0FM
03070123 PY5ZAH 59                         S PY0FM
03070204 PU3WPA 55                         S PY0FM
03090136 PY2BQM 59, 0143 PY5AQ  59         S PY0FM
03132038 PP5JD 559, 2304 PY5ZBU 59        CS PY0FM
03132356 PY2DSC 59                         S PY0FM
03140047 PY2XB  59, 0049 PY1QP 59          S PY0FM
03140102 PY2XW 599, 0147 PY5BAZ 559        C PY0FM
03140150 PY2VA  59, 0200 PY3RBY/PY2        S PY0FM
03140212 PY2BQM 59, 0222 PY2ANE 55         S PY0FM
03211954 PP5BC  59                         S PY0FM
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French Guiana:

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03140207 FY7THF/B 519                      B PY0FM
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Paraguay:

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03030038 ZP5PT  59                         S PY0FM
03040015 ZP5PT  59                         S PY0FM
03040025 ZP5ZR  59                         S PY0FM
03070032 ZP5ZR  59                         S PY0FM
03131935 ZP5PT  59, 1936 ZP5YW  59         S PY0FM
03132329 ZP5ZR  59, 2336 59              S/F PY0FM
03140028 ZP5JCY 59                         S PY0FM
03190227 ZP5YW  59, 0230 ZP5FGS 57         S PY0FM
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Uruguay:

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03030038 CX8BE  59                         S PY0FM
03030039 CX1TAD 59                         S PY0FM
03042023 CX1CCC/B 559                      B PY0FM
03070015 CX6DH  59                         S PY0FM
03070022 CX1TAD 59                         S PY0FM
03151800 CX1CCC/B 559                      B PY0FM
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Beacon News

K6QXY reports hearing a new beacon, W0MTK/B, in DM59 on 50.064 MHz and writes, "UTAH?", but the only city with six meter action that I know of in that grid square is Grand Junction, CO. We in CA could only **hope** for beacons in the wide-open spaces of NV, UT, WY, ID, & MT.

Argentina: Two beacons in GF05, LU3EMK on 50.082, and LU8DCH on 50.0835, both running 1W. Tnx LW5EJU via June's **World Above 50 MHz**.

California: Joe Lynch reports in **VHF Plus** in ***CQ*** magazine that KB6BKN in Novato, CM88, is running a beacon on 50.0628 daily from 4 AM to 9:30 AM local time (presently 1100-1630UTC).

Johnston Is.: Ted, NH6YK, e-mails: "I talked with Richard Giles KH3AF the other day, and in amongst our talking about satellites, I asked about 6M. (having worked him on RS10, I figure that maybe I can get him on 10M/6M and maybe we can start investigating 2M :-) (I haven't mentioned 2M to him yet))--his reply, the 6M beacon on Johnston was taken off the air due to interference to other radios on the island. However, those radios will be undergoing a shift in frequency in the near future and the beacon will be back on the air soon after. He noted that they have a 12element antenna for 6 on the island, and that as soon as he gets the satellite station up and going, 6 will get some attention also."

Japan (Okinawa): JA1VOK writes that JR6YAG was re-installed on 50.037 in PL36 with 8W output and 5/8 wavelength vertical on April 17. SWL reports should be sent to Ken, JR6HI.

Malaysia (Sabah): JA1VOK reports that the 9M6SMC beacon (donated by G4SMC) has been on the air on 50.014 MHz with FSK from OJ85ax and has been heard frequently in JA since April 24.

Philippines: JA1VOK reports the DX1HB/B back on the air on 50.008 on April 29 by KB6VAT's re-arrangement since off the air last December.

TV Station List

The reference **44-108 MHz TV Stations Worldwide,** in ZL4AAA's article (Feb 94 Bulletin), is no longer available from Gunter Lorenz. There is a new Edition 2.0 August 1993 available for DM 12.50 from Hans-Jürgen Kuhlo, UKW-TV-Arbeitskreis, Im Strehling 8, D-64342 Seeheim-Jugenheim, GERMANY.

He requested that I send IRC or German stamps or ask my bank to send the money to Postal Giro Account 201100-466 (bank code Germany 440 10046) Postgiro omt Dortmund. He did not know if this was an International Postal Money Order or not.

My credit union knew nothing about bank transfers, and even wanted $50 to cash a Canadian check made out in U.S. dollars. (They want $10 to cash a Canadian check made out in

Canadian dollars.) Our post office wants $7.50 + the face value for an International Postal Money Order in U.S. dollars which would be sent out in a week from St. Louis. Fortunately American Express was able to supply me with a couple DM 10 notes (for about $13), and I mailed them to him.

I now see why some of our overseas subscribers are renewing with "green stamps." I wonder how much of a cut the overseas banks and post offices want on their end?

DX-pedition News

C.I.S.: Received from JA1VOK too late for last months bulletin, "The Club Station of the Friendship Amateur Radio Society of Khabarovsk RZ0CZZ or new callsign in Khabarovsk (grid:PN78) will be activated again on 50.115/50.120 split (calling frequency 5 kHz up) with FT-650 & 6el beam supported by JA1UT, JH0PCO, JR0BQT & JR0CGJ on June 4-9. Multi-hop E skip propagation to N. America or Europe can be tried. Satellite also can be operated. QSL via JR0CGJ.

England: If you still need IO66 on 50 MHz, a group of Worked All Britain ops (WAB) will activate this grid square along with IO67 and IO77, between June 10 and 24. The days for IO66 are June 12 and 24. Operators are G7BXA, G7HSB, G7DKX, and G0NES. Tnx G0JHC via SM7AED.

Estonia: Arne, SM7AED, reports that ES5MC and others will most probably activate KO07, Saaremaa Island, the last 3-5 days of July. (From SM0KAK).

Norway: The first week in July LA5EDA/p will be QRV from grid square JP55. Tnx SM7AED. QSL to Roar Jegtvolden, Asliv 22, N-3525 Hallingby, Norway.

Jan Mayen: Per-Einar, LA7DFA, will be QRV on 50 MHz as JX7DFA from the end of June 1994 to April 1995. He is mostly on 144 MHz, but will try 6M with FT736, 10W, and a dipole.

Canada: Grid square hunters may be interested in N5EPA's radio vacation, starting on June 13, to DN97,DN87,DN88,DN98, DN89,DN79,DN69,DN59,DO60,DO50,DO41,DO31,DO21, DO11,DO12,DO02,DO03,DO02,DO01,DO11,DO10, and DO20. He will operate 50.130 or higher and will be running 80 W to a vertical whip when in motion and a 5el Yagi when stationary.

EME News

K6QXY writes that W7FH just got on 6m EME with 4 6el Yagis Az/El, and 1 KW. He worked Bob May 19 at 0230-0234 and then K6MYC also.

Equipment News

Owners of Kenwood TS-690S transceivers may be interested in **Hints and Kinks** in June 1994 ***QST***, in which W1JA makes public the bias problem in the TS-690S's driver. Readers may find the editorial comment afterwards revealing: "QST's TS-450S/TS-690S Product Review (April 1992, pages 67-71) found no trace of such 6-m SSB distortion in the TS-690S tested. To paraphrase the old saying, if your particular radio ain't broke, don't fix it." Could Kenwood have sent them a "doctored" rig?

Scientists in and around 6m

Here are a couple experiments that appeared in recent literature. The first appeared in ***Radio Science***, Vol. 28, #6 (Nov-Dec 1993), pp 959-978. It is titled "A 50 MHz radio Doppler experiment for midlatitude E region coherent backscatter studies: System description and first results" and was written by C. Hadoupis of the Physics Dept., Univ. of Crete, Iraklion, Crete, Greece and K. Schlegel of Max-Planck-Institute für Aeronomie, Katlenburg-Lindau, Germany.

The transmitter is located at Chanea, 35.53°N 24.07°E and the receiver is located at Iraklion, 35.31°N 25.01°E, 100 km apart. The transmitter is 1 kW CW on 50.521000. The antennas are aimed at a point 105 km above 36.7°N 24.7°E where (presumably) FAS (field-aligned-scatter) geometry is satisfied. The antenna array consists of four 11 el Yagis on 2.5 wavelength booms spaced 8m apart, resulting in 18 dB gain and horizontal beamwidth of 8°. The antennas are tilted up 30° and have a vertical beamwidth of approx. 35°.

The experiment is called SESCAT (Sporadic E SCATter experiment), and started mid-February 1992. It has been operated on a several-day campaign basis during Feb, Mar, May, and June 1992. The authors reported Sporadic-E backscatter events with SNRs up to 25 dB and lifetimes of several minutes to greater than one hour, mostly during darkness, a few hours before local midnight and after. Doppler spectra were measured corresponding to moving reflectors with ±80 m/s and a width of 30-60 m/s. Also, meteor-induced backscatter was observed with abrupt onset and length up to 3 minutes.

The second experiment was reported in JATP (***Journal of Atmospheric & Terrestrial Physics***) March 1994, starting pg 529. This is a 20 kW peak pulse radar on 54.95 MHz near Trivandrum India. A 5 ms interpulse period would indicate a 200 pulses per second. Beamwidths of 3.5° E-W and 10° N-S were indicated as well as nighttime operation. Ed-I can't believe the notes I took on this one were so sparse! And I'm writing this from the boonies!

1994 CQ WW VHF WPX Contest

Three contests that will have 6m activity (as well as other bands) overlap our 50 MHz DX Marathon (June 18-July 18), which we announced in the April Bulletin. They are 1) the 1994 SMIRK Party Contest (June 18 00Z-June 19 24Z [48 hours]), the ARRL Field Day (June 25-26), and the CQ World-Wide VHF WPX Contest (July 9 18Z-July 10 21Z [27 hours].

Rules may be found in May 1994 ***CQ*** Magazine, but are summarized here. The objective is to collect VHF and above Maidenhead locator grid squares and prefixes. All authorized amateur radio bands above 50 MHz may be used. There are 8 categories: 1)Single operator fixed station; 2)Multi-op class I fixed station; 3)Multi-op class II fixed station; 4)Single operator portable station; 5)Multi-op class I portable station; 6)Multi-op class II portable station; 7)Rover station; and 8)QRP station (25 watts output or less). A class II station operates on 4 or less bands, while a class II station operates on more than 4. A Rover may be operated by no more than two operators, and must travel to more than one prefix and/or grid square and must sign "Rover" or /R. Contacts from your home QTH cannot be counted as Rover contacts.

The exchange is callsigns and Maidenhead grid square locators (to four digits). Signal reports are optional and need not be included in the log entry. The multiplier is the number of different prefixes worked plus the number of different grid squares worked per band. A Rover can count each prefix and grid square from each new prefix or grid square location; others can count prefixes and grid squares only once per band.

Aeronautical mobile stations are not eligible to compete, but may be worked for prefix credit only. Maritime mobile stations are encouraged and may be eligible for Rover class if they operate from more than one grid square.

One point per QSO on 50, 70, & 144 MHz, 2 points on 222 and 432 MHz, 4 points on 903 & 1296 MHz; 6 points 2.3 GHz and higher. Add one point to the QSO value for CW or MCW contacts. SSB contacts on the calling frequencies of 50.110, 50.125, and 144.200 MHz are discouraged. Stations on the dividing line of a prefix or grid square must choose one, and move the complete contest station at least 100 meters to use another. Also, only one callsign per station.